



PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of

Docket No: Q65398

Toru IWAKAWA

Appln. No.: 09/936,363

Group Art Unit: 3635

Confirmation No.: 4514

Examiner: Basil S. Katcheves

Filed: September 13, 2001

For: A REINFORCING HOLDING AGAINST VIABRATIONS

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SUBMISSION OF APPELLANT'S BRIEF ON APPEAL

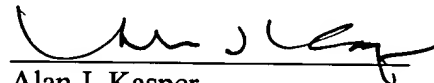
Commissioner for Patents
Washington, D.C. 20231

Sir:

Submitted herewith please find an original and two copies of Appellant's Brief on Appeal. A check for the statutory fee of \$320.00 is attached. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account. A duplicate copy of this paper is attached.

Respectfully submitted,

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WASHINGTON OFFICE



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PATENT TRADEMARK OFFICE

Date: June 11, 2003



#16

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APPELLANTS' BRIEF ON APPEAL UNDER 37 C.F.R. § 1.192

Commissioner for Patents
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Sir:

In accordance with the provisions of 37 C.F.R. § 1.192, Appellant submits the following:

I. REAL PARTY IN INTEREST

Based on information supplied by Appellants, and to the best knowledge of Appellants' legal representatives, the real party in interest is the assignee, NIPPON EISEI CENTER CO. LTD.

II. RELATED APPEALS AND INTERFERENCES

Appellants, as well as Appellants' assigns and legal representatives are unaware of any appeals or interferences which will be directly affected by, or which will directly affect, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1-18 are pending in the application. Claims 1-18 are finally rejected. Thus, claims 1-18 are the subject of this appeal and, as finally rejected, are set forth in the attached Appendix.

IV. STATUS OF AMENDMENTS

Claims 1-18 as rejected have been pending in the present application since the filing and entry of an Amendment on September 26, 2002, which amended claims 1-4 and added new claims 13-18. were in the originally filed application. A preliminary amendment, which amended original claims 4 and 5 and added new claims 6-12, was submitted and entered at the time the application was filed. A Request for Reconsideration, filed on April 1, 2003 in response to the final Office Action mailed on November 1, 2002, did not add, cancel or amend any claims but was entered. An Advisory Action mailed April 22, 2003 stated that the Request for Reconsideration was considered, but continued to hold claims 1-18 unpatentable. Following issuance of the Advisory Action, on April 22, 2003 Appellants appealed the final rejection of claims 1-18.

V. SUMMARY OF THE INVENTION

The subject matter of the present invention as claimed is a reinforcing holder (1) for use in **building construction**, particularly wooden buildings, (2) which may be subject to **seismic vibration**.

As illustrated in Fig. 1, the invention comprises an elongated metal plate 1 having a fixing piece 11 at each of the two opposite ends, and an intermediate part 12. Each of the fixing pieces 11 is bent in the same direction to form a mounting surface for attachment to one side of a first structural member, and may be further bent to form an edge piece 17 that contacts a second side of the first structural member. The mounting surface may include an absorbing member 2 having rubber elasticity and providing vibration damping. The mounting surface and edge piece of the fixing piece 11 are sized to enable the plate to be fixed along first and second adjacent side

surfaces of the structural member. The intermediate part 12 provides an additional vibration absorbing function by the use of a bent and swelled part 13 or curved and swelled part 14, each of which being extended outward of the intermediate part 12. Further, a center portion of the parts 13 or 14 may have a bent inward or outward portion 15 that is shaped to form a "cushion round," which can enhance the vibration absorbing effect of the novel holder design. The contact surface 22 of the absorbing member that contacts the structural member (Fig. 3) will provide a desired vibration absorption function.

All of the claims, which define features of the holder, expressly recite the environment within which the holder is used, namely for (1) joining structural members in a building and (2) reinforcing against seismic vibrations, thereby limiting the scope of the invention and the range of relevant art.

VI. ISSUES

This appeal presents three issues:

- Issue A:** Are claims 1-3, 5, 8-12 and 13 unpatentable over **Munro (1,859,105)** in view of **Zaparka (2,049,555)**. under 35 USC §103(a)?
- Issue B:** Are claims 4, 6, 7 and 16 unpatentable over **Munro (1,859,105)** in view of **Zaparka (2,049,555)**. under 35 USC §103(a)?
- Issue C:** Are claims 14, 15, 17 and 18 unpatentable over **Munro (1,859,105)** in view of **Zaparka (2,049,555)**. under 35 USC §103(a)?

VII. GROUPING OF CLAIMS /

Claims 1-3, 5 and 8-13, comprising independent claim 1, dependent claims 2, 3, 5 and 8-12, as well as independent claim 13 stand and fall together, because they all are directed to the basic features of the reinforcing holder for fixing to building structural members, including a base member formed by a plate that is twisted and bent, and an absorbing member having rubber

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elasticity. This combination of features is not in any cited art and is an independent basis for patentability.

Claims 4, 6, 7 and 16 stand and fall together, because they all are directed to the basic features of the reinforcing holder for fixing to building structural members, including a base member formed by a plate that is twisted and bent, and an absorbing member having rubber elasticity, as well as a cushion round formed in the approximately center part of an intermediate part of the reinforcing base member. This combination of features is not in any cited art and is an independent basis for patentability.

Claims 14, 15, 17 and 18 stand and fall together, because they all are directed to the reinforcing holder for fixing to building structural members, including a base member formed by a plate made of high tension material with opposite ends that contact structural members, the reinforcing holder having absorbing members that are sandwiched between the plate surface and respective structural members, and at least one of first and second bent parts having first and second bent portions for engaging different surfaces of a respective structural member. This combination of features, which further defines the location and function of the absorbing member with respect to the ends of the plate and the structural members, is not in any cited art and is an independent basis for patentability.

VIII. ARGUMENTS

ISSUE A - **Claims 1-3, 5 and 8-13 are patentable over Munro (1,859,105) in view of Zaparka (2,049,555) under 35 USC §103(a).**

The subject matter of independent claim 1, dependent claims 2, 3, 5 and 8-13, as well as independent claim 13 is a reinforcing holder that is effective **against seismic vibrations** and is used for joining **structural members in a building**. The reinforcing holder of these claims comprises a reinforcing base member formed by twisting and bending both end parts of a plate in one direction to form fixing pieces. The reinforcing holder further includes an absorbing members having rubber elasticity. The reinforcing base member can be fixed to the structural members in the building via the absorbing members. The dependent claims 2, 3, 5 and 8-12 further specify the structural characteristics of the reinforcing base member of independent claim

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1, including shape (claims 2 and 3) and material (claims 5 and 8-12). The express focus of the invention on a reinforcing holder for joining structural members in a building is clearly recited in the claims.

Munro

The Examiner cites the patent to Munro as the basic reference. The Examiner asserts that Munro teaches an anti-vibration leaf spring comprised of a twisted and bent forms of a plate that substantially meets all of the limitations of the claims. However, the leaf spring structure is for a vehicle. Specifically, the disclosed leaf spring is intended to provide an improvement in vehicle supporting springs so that comfort for passengers can be ensured (page 1, lines 1-5). As conventionally arranged according to the illustrations in Figs. 1 and 3, ends 2, 3 of the spring are secured to a channel iron 1 by fasteners 4 and with the use of sound deadening material 5. The spring is also joined to axle casing 7 and secured with U-bolts 8 or the like. There is no mention at all in Munro of any application of the vehicle leaf spring design to reinforcing holders for buildings, particularly for resisting seismic vibrations.

The Examiner admits that Munro does not teach a rubber material used for the sound deadening material 5. The Examiner looks to Zaparka for such teaching.

Zaparka

The Zaparka patent also is concerned with a leaf spring support for a vehicle, particularly as illustrated in Figs 1 and 2. The Examiner points to the rubber mounts 6 in Fig 2 as pertinent to the "absorbing member" limitation in the claim. The Examiner concludes that one skilled in the art would add to Munro a rubber mount as seen in Zaparka, thereby creating a structure that meets the claimed invention.

The Examiner's rejection is based on a conclusion that the express limitations in the claims to a reinforcement holder for use in a building to absorb seismic vibrations can be ignored. The Examiner's rejection must be overturned for at least the following reasons:

The Limitation in the Claims to a Reinforcing Holder For Joining Structural Members in a Building is Not Found in the Prior Art

The claims are expressly limited to a reinforcing holder for absorbing seismic vibrations and joining structural members in a building. Clearly, the prior art is directed only to leaf spring structures for vehicles. In the Office Action dated November 1, 2002, the Examiner admits that there is no teaching relevant to earthquake protection for a building. The Examiner admits that the teachings of Munro and Zaparka are limited to vehicle suspensions. Finally, the Examiner admits that "the instant application and the prior art combination are different devices but they are used to solve the same problem of damping vibrations." Here the Examiner's thesis for finding the prior art pertinent to the claimed invention is flawed.

The Problems Encountered By the Prior Art and Claimed Invention In The Building Arts Are Significantly Different From Those In The Vehicle Arts

The problems are not the same, but are significantly different in degree, direction, content and required solution. The forces that is imparted by a seismic event and is of sufficient concern such that building structures must be designed for their absorption, using the present invention clearly are different from those encountered by a vehicle, or in many other environments.

Vibration is encountered in a broad spectrum of devices including false teeth, bridges, vehicles, printers, manufacturing machines, toys, etc. It is clear error for the Examiner to insist that the technology of any one of these diverse applications may be simply applied to other applications without considering their different environments. Structures appropriate for a toy are clearly not appropriate for a bridge. Similarly, structures for a building are not appropriate for a vehicle. The nature of the vibrations are different particularly with respect to intensity, direction and frequency, and the requirements for the building and the vehicle are totally different. The requirement for the building is to maintain intense loads in a stationary structure, which may be subject to infrequent but violent vertical and lateral forces. The requirement for

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the vehicle is to provide a smooth ride to passengers in a moving structure. Clearly, the direction of the forces as well as their magnitudes and frequencies are quite different.

In the present case, the force is different by orders of magnitude. One need not even experience an earthquake to understand that the seismic vibrations are significantly greater than those in a vehicle. The direction of the force is different, the seismic vibration being any of a variety of rolling, sliding, vertical or horizontal forces, while the forces encountered by vehicles and compensated by the vehicle suspensions are primarily vertical, particularly those suspensions of the vintage of the cited prior art references.

The building and seismic environment of the invention is expressly stated in the claims.

The Examiner's Decision to Ignore the Preamble Limitations is a Fundamental Error

The Examiner presumes that he can ignore the express limitations in the claim, specifically the function of joining structural members in a building, and can thus conclude that the leaf spring structures meet the claimed invention. Only by this erroneous premise does the Examiner assert that the common generic purpose of the prior art leaf spring structures and reinforcing holder to damp vibrations permits a conclusion that the basic claimed structure is found in the prior art. Indeed, during an interview, the Examiner took the unqualified position that preamble limitations are not considered in determining patentability.

However, Appellant submits that the limitations in the preamble of independent claims 1 and 13 cannot be ignored.

Applicable Law Requires The Examiner to Consider the Preamble Limitations

On the basis of applicable law, the Examiner is mistaken in his assumptions and resulting analysis. The law and practice related to preambles in claims, as reflected in the MPEP 2111.02, requires the content of the preamble to be considered as a limitation of the claim.

"[A] claim preamble has the import that the **claim as a whole suggests** for it."
Bell Communications Research, Inc. v. Vitalink Communications Corp., 55 F.3d
615, 620, 34 USPQ2d 1816, 1820 (Fed. Cir. 1995). "If the claim preamble, when

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read in the context of the entire claim, recites limitations of the claim, or, if the claim preamble is **'necessary to give life, meaning, and vitality' to the claim**, then the claim preamble should be construed as if in the balance of the claim." *Pitney Bowes, Inc. v. Hewlett-Packard Co.*, 182 F.3d 1298, 1305, 51 USPQ2d 1161, 1165-66 (Fed. Cir. 1999). See also *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951) (A preamble reciting "An abrasive article" was deemed essential to point out the invention defined by claims to an article comprising abrasive grains and a hardened binder and the process of making it. The court stated "it is only by that phrase that it can be known that the subject matter defined by the claims is comprised as an abrasive article. Every union of substances capable *inter alia* of use as abrasive grains and a binder is not an 'abrasive article.'" Therefore, **the preamble served to further define the structure of the article produced.**).

Any terminology in the preamble that limits the structure of the claimed invention must be treated as a claim limitation. See, e.g., *Corning Glass Works v. Sumitomo Elec. U.S.A., Inc.*, 868 F.2d 1251, 1257, 9 USPQ2d 1962, 1966 (Fed. Cir. 1989) (The determination of whether preamble recitations are structural limitations can be resolved only on **review of the entirety of the application "to gain an understanding of what the inventors actually invented and intended to encompass by the claim."**); *Pac-Tec Inc. v. Amerace Corp.*, 903 F.2d 796, 801, 14 USPQ2d 1871, 1876 (Fed. Cir. 1990) (determining that preamble language that constitutes a structural limitation is actually part of the claimed invention). See also *In re Stencel*, 828 F.2d 751, 4 USPQ2d 1071 (Fed. Cir. 1987). (The claim at issue was directed to a driver for setting a joint of a threaded collar, however the body of the claim did not directly include the structure of the collar as part of the claimed article. The examiner did not consider the preamble, which did set forth the structure of the collar, as limiting the claim. The court found that the collar structure could not be ignored. While the claim was not directly limited to the collar, the collar structure recited in the preamble did limit the structure of the driver. "[T]he framework - the teachings of the prior art - against which patentability is measured is not all drivers broadly, but drivers suitable for use in combination with this collar, for the claims are so limited." *Id.* at 1073, 828 F.2d at 754.). (emphasis added)

Clearly, on the basis of the foregoing guidance and cited decisions by the Federal Circuit, the preamble must be considered where the preamble breathes life and breath into the claimed invention. The present claims expressly define the invention as being a structural element for use in building construction, particularly for absorbing seismic vibrations.

The Preamble Limitations Are Expressly Tied to the Claim Body

In the present case, the preamble refers to “structural members” in a building, which is to be secured against seismic vibrations. The “reinforcing base member” in the body of the claim was described as “being fixed to said structural members via said absorbing members” in order to define the structure of the reinforcing holder with respect to the “structural members in a building”. By tying the preamble to the body of the claim in this manner, the inventor has defined the invention in each of the claims as a whole as being related to a building construction device. *In re Paulsen*, 31 USPQ2d 1671, 1672-74 (Fed. Cir. 1994) Clearly, the inventor intended the environment of a building structure to be considered in defining the invention, and this intention is supported by remarks in the file history. The claims as a whole define the invention as a reinforcing holder for building structures, and do so in a manner that distinguishes over the prior art.

The Entirety Of The Application Is Directed To A Building Environment

Applicants have invented a reinforcing holder for building structures, as disclosed in the entirety of the specification and as set forth in the claims. The specification does not disclose anything else. The claims specifically state the environment for the structure, and the body of the claim expressly ties the claimed structure to the environment in the preamble. The preamble provides more than a simple statement of purpose, but provides a structural difference from the prior art. There can be no doubt that the present claims fall within the category of inventions that the courts and USPTO under the above quoted policy in the MPEP would find to be properly defined and limited by statements in the preamble.

The Preamble Must Be Considered And The Claims Are Patentable

Since the building environment must be considered, the claimed invention must be patentable. As previously stated, nothing in the prior art relates to a reinforcing holder for use with building structures to compensate for seismic vibrations.

ISSUE B: **Claims 4, 6, 7 and 16 are patentable over Munro (1,859,105) in view of Zaparka (2,049,555) under 35 USC §103(a).**

The subject matter of dependent claims 4, 6 and 7 is the reinforcing holder of independent claim 1. Similarly the subject matter of dependent claim 16 is the reinforcing holder of independent claim 13. These dependent claims specify that the reinforcing base member has a cushion round "formed in the approximate center part of an intermediate part." This claim limitation corresponds to the rounded portion 15 in Fig. 1 of the present application. No such structure is found in the cited art, even if the preamble is ignored. The Examiner admits that Munro does not disclose such structure. The Examiner asserts that Zaparka has such structure in Figs. 2 and 6. However, nothing in those Figures illustrates the claimed "cushion round." The only structure that has even a remote correspondence to the claimed base member is a flat plate leaf spring that has no such round portion in its center. Moreover, it would be inconsistent with the function of the leaf springs in Munro and Zaparka to have a cushion round in its center, as such round would form a weak spot and become a center of material crystallization, resulting in spring fracture.

Further, the claims are patentable for the reasons given for claims 1 and 13.

ISSUE C: **Claims 14, 15, 17 and 18 are patentable over Munro (1,859,105) in view of Zaparka (2,049,555) under 35 USC §103(a).**

The subject matter of dependent claims 14, 15, 17 and 18 is the reinforcing holder of independent claim 13. These dependent claims specify that the reinforcing base member has first and second bent parts at its opposite plate ends, and that at least one of the bent parts has two bent portions. One portion engages a first surface of a structural member and a second bent portion engages a second surface of the structural member. This arrangement is illustrated in Fig. 2. Nothing in the two references, particularly given their limited focus on vehicle spring structures, can meet these limitations. The Examiner appears to acknowledge the deficiencies in the teachings of these references, as there is no comment made in the Office Action of November

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1, 2002 or the Advisory Action with regard to the structure in the prior art that may even remotely relate to this structure.

Further, the claims are patentable for the reasons given for claims 1 and 13.

The present Brief on Appeal is being filed in triplicate. Unless a check is submitted herewith for the fee required under 37 C.F.R. §1.192(a) and 1.17(c), please charge said fee to Deposit Account No. 19-4880.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

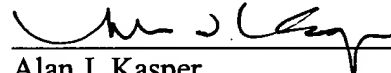
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23373

PATENT TRADEMARK OFFICE


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Date: June 11, 2003

APPENDIX

CLAIMS 1-18 ON APPEAL:

1. A reinforcing holder against seismic vibrations for joining structural members in a building comprising:

a reinforcing base member formed by twisting and bending both end parts of a plate in one direction to form fixing pieces, and

absorbing members having rubber elasticity,

the said reinforcing base member being fixed to said structural members via said absorbing members.

2. The reinforcing holder against vibrations according to claim 1, wherein a bent and swelled part having a plane face is formed by bending twice outward an intermediate part of the reinforcing base member.

3. The reinforcing holder against vibrations according to claim 1, wherein a curved and swelled parts having curved face is formed by curving outward an intermediate part of the reinforcing base member.

4. The reinforcing holder against vibrations according to claim 1, wherein a cushion round is formed in the approximate center part of an intermediate part of the reinforcing base member.

5. The reinforcing holder against vibrations according to claim 1, wherein the said plate is formed of high tension steel.

6. The reinforcing holder against vibrations according to claim 2, wherein a cushion round is formed in the approximate center part of the intermediate part of the reinforcing base member.

7. The reinforcing holder against vibrations according to claim 3, wherein a cushion round is formed in the approximate center part of the intermediate part of the reinforcing base member.

8. The reinforcing holder against vibrations according to claim 2, wherein the said plate is formed of high tension steel.

9. The reinforcing holder against vibrations according to claim 3, wherein the said plate is formed of high tension steel.

10. The reinforcing holder against vibrations according to claim 4, wherein the said plate is formed of high tension steel.

11. The reinforcing holder against vibrations according to claim 6, wherein the said plate is formed of high tension steel.

12. The reinforcing holder against vibrations according to claim 7, wherein the said plate is formed of high tension steel.

13. A reinforcing holder against seismic vibrations for joining structural members in a building, comprising:

a reinforcing base member including an elongated plate made of high tension material, said plate having

(1) at one plate end a first bent part that is sized and shaped to bracingly contact at least one surface of a first structural member,

(2) at an opposite plate end a second bent part that is sized to bracingly contact at least one surface of a second structural member, said first and second bent parts being bent in the same direction, and sized to be affixed to a surface of a respective structural member, and

(3) an intermediate part between said first and second bent parts, which is formed with an outwardly extended face, and

absorbing members having rubber elasticity, a respective member being affixed to a surface of each of said first and second bent parts such that it is sandwiched between said plate surface and said structural member in an operative position.

14. A reinforcing holder as set forth in claim 13, wherein at least one of said first and second bent parts comprises a first bent portion that is adapted to engage a first surface of a

respective structural member and a second bent portion that is bent and shaped to engage a second surface of said structural member.

15. The reinforcing holder as set forth in claim 14, wherein an absorbing member is affixed to said first bent portion.

16. A reinforcing holder as set forth in claim 13, wherein said intermediate portion has a cushion round formed in the approximate center part thereof.

17. The reinforcing holder as set forth in claim 14, wherein said intermediate portion comprises a curved and swelled part having curved face and being formed by curving outward the intermediate portion.

18. The reinforcing holder as set forth in claim 14, wherein said intermediate portion comprises a bent and swelled part having straight face and being formed by bending outward the intermediate portion.